

IN THE CLAIMS:

Claim 1 (Currently Amended): A data pad region of a liquid crystal display panel, comprising:

a substrate having an insulating layer disposed thereon;

a plurality of data lines vertically arranged at specified intervals on the substrate;

a plurality of data pads respectively connected to the data lines, each data pad including a first contact area having a plurality of first contact regions exposing first side portions of the data line and first portions of the insulating layer, a second contact area having a plurality of second contact regions exposing second side portions of the data line and second portions of the insulating layer, and a central contact area disposed between the first and second contact areas and exposing a third portion of the insulating layer; and

a conductive material disposed within each of the first, second, and central contact areas and continuously contacting each of the first and second side portions of the data line and the first and second portions of the insulating layer exposed in the first and second contact regions, respectively, and the third portion of the insulating layer, wherein a contact area of the conductive material and the third portion of the insulating layer is greater than each contact area of the conductive material and the first and second portions of the insulating layer

~~at least one first side contact with a first area formed in each data pad, the data line being side contacted with a conductive material in the first side contact; and~~

~~at least one second side contact with a second area formed in each data pad, the data line being side contacted with the conductive material in the second side contact,~~

~~wherein the first side contact is positioned in a central portion of the data pad and a first contact area contacted with the conductive material is larger than a second area contacted with the conductive material.~~

Claim 2 (Currently Amended): The data pad region of claim 1, ~~wherein the first side contact is positioned in a central portion of the data pad~~ conducting material contacts one of the first side portions of the data line of the first contact area and one of the second side portions of the data line of the second contact area within the central contact area of the data pad.

Claim 3 (Currently Amended): The data pad region of claim 2, ~~wherein at least two second side contacts are respectively formed at one end of each data pad and at the other end of each data pad~~ further including an active layer disposed over the substrate and contacting the plurality of date lines.

Claim 4 (Currently Amended): A method for fabricating a data pad region of a liquid crystal display panel, comprising:

forming a gate insulating layer, data lines and a passivation film in a data pad forming region of a substrate, the data pad forming region including a first contact area having a plurality of first contact regions exposing first side portions of the data line and first portions of the gate insulating layer, a second contact area having a plurality of second contact regions exposing second side portions of the data line and second portions

of the gate insulating layer, and a central contact area disposed between the first and second contact areas and exposing a third portion of the gate insulating layer; and forming a conductive material disposed within each of the first, second, and central contact areas and continuously contacting each of the first and second side portions of the data line and the first and second portions of the gate insulating layer exposed in the first and second contact regions, respectively, and the third portion of the gate insulating layer, wherein

a contact area of the conductive material and the third portion of the gate insulating layer is greater than each contact area of the conductive material and the first and second portions of the gate insulating layer

~~forming at least one first side contact hole with a first area at the central region of the data pad forming region and forming at least two second side contact holes with a second area respectively at both edges of the data pad forming region; and~~

~~forming at least one first side contact electrically connecting one of the data lines to a conductive layer at the first side contact hole and forming at least one second side contact electrically contacting the data line to the conductive layer at the second side contact hole by patterning a conductive material,~~

~~wherein the first side contact is positioned in a central portion of the data pad and a first contact area contacted with the conductive material is larger than a second contact area contacted with the conductive material.~~

Claim 5 (Original): The method of claim 4, wherein the passivation film is made of an organic material.

Claim 6 (Original): The method of claim 4, wherein the passivation film is made of BCB (benzocyclobutene).

Claim 7 (Original): The method of claim 4, wherein the passivation film is formed as a triple deposition structure of SiNx film/BCB (benzocyclobutene) film/SiNx film.

Claim 8 (Original): The method of claim 4, wherein the data line is made of Mo.

Claim 9 (Original): The method of claim 4, wherein the data line is etched by dry-etching.

Claim 10 (Currently Amended): The method of claim 4, wherein the first and second portions of the gate insulating layer is are exposed at the bottom surfaces of the first side contact hole and the second side contact hole by dry-etching of the passivation film.

Claim 11 (Currently Amended): A data pad region of a liquid crystal display panel, comprising:

a substrate;

a gate insulating layer, data lines and a passivation film in a data pad forming region of the substrate, ~~wherein the passivation film in the data pad forming region including at least one first side contact hole with a first area and at least one second side contact hole with a second area, wherein the first area is larger than the second area, the first side contact and the second contact being covered with conductive material~~ the data pad forming region includes a plurality of regions, wherein

a plurality of first contact holes within a first region exposes a plurality of first portions of the gate insulating layer and first side portions of the data lines,
a plurality of second contact holes within a second region exposes a plurality of portions of the second gate insulating layer and second side portions of the data lines, and

a third contact hole within a third region disposed between the first and second regions exposes a third portion of the gate insulating layer; and
a conductive material disposed within each of the first and second pluralities of contact holes and within the third contact hole, the conductive material contacting each of the first and second side portions of the data lines and the first and second portions of the gate insulating layer, wherein

a contact area of the conductive material and the third portion of the gate insulating layer is greater than each contact area of the conductive material and the first and second portions of the gate insulating layer

~~at least one first side contact electrically connecting one of the data lines to a conductive layer at the first side contact hole and at least one second side contact electrically connecting the data line to the conductive layer at the second side contact hole,~~

~~wherein the first side contact hole is positioned in a central portion of the data pad and at least two second side contact holes are respectively formed at one end of each data pad and at the other end of each data pad, a first contact area contacted with the conductive material is larger than a second contact area contacted with the conductive material.~~

Claim 12 (Original): The data pad region of claim 11, wherein the passivation film is made of an organic material.

Claim 13 (Original): The data pad region of claim 11, wherein the passivation film is made of BCB (benzocyclobutene).

Claim 14 (Original): The data pad region of claim 11, wherein the passivation film is formed as a triple deposition structure of SiNx film/BCB (benzocyclobutene) film/SiNx film.

Claim 15 (Original): The data pad region of claim 11, wherein the data line is made of Mo.

Claim 16 (Currently Amended): A liquid crystal display panel, comprising:

a substrate having an image display region with unit pixels arranged in a matrix and a data pad region at the periphery of the image display region, wherein the data pad region includes:

an insulating layer on the substrate;

a plurality of data lines vertically arranged at specified intervals on the substrate;

a plurality of data pads respectively connected to the data lines;

a first contact area having a plurality of first contact regions exposing first side portions of the data lines and first portions of the insulating layer;
a second contact area having a plurality of second contact regions exposing second side portions of the data lines and second portions of the insulating layer;

a central contact area disposed between the first and second contact areas and exposing a third portion of the insulating layer; and

a conductive material disposed within each of the first, second, and central contact areas and continuously contacting each of the first and second portions of the data line and the first and second portions of the insulating layer exposed in the first and second contact regions, respectively, and the third portion of the insulating layer, wherein

a contact area of the conductive material and the third portion of the insulating layer is greater than each contact area of the conductive material and the first and second portions of the insulating layer

~~at least one first side contact with a first area formed in each data pad, the data line being side contacted with a conductive material in the first side contact; and~~

~~at least one second side contact with a second area formed in each data pad, wherein the first area is larger than the second area, the data line being side contacted with the conductive material in the second side contact~~

~~wherein the first side contact is positioned in a central portion of the data pad and a first contact area contacted with the conductive material is larger than a second contact area contacted with the conductive material.~~

Claim 17 (Currently Amended): The liquid crystal display panel of claim 16, wherein the conductive material includes a pixel electrode at of the unit pixel pixels.

Claim 18 (New): The data pad region of claim 1, wherein the conductive material includes a transparent conductive material.

Claim 19 (New): The data pad region of claim 1, wherein the conductive material includes a pixel electrode.

Claim 20 (New): The method of claim 4, further comprising forming an active layer between the gate insulating layer and the data lines.

Claim 21 (New): The method of claim 4, wherein the conductive material includes a transparent conductive material.

Claim 22 (New): The method of claim 4, wherein the conductive material includes a pixel electrode.

Claim 23 (New): The data pad region of claim 11, further comprising an active layer between the gate insulating layer and the data lines.

Claim 24 (New): The data pad region of claim 11, wherein the conductive material includes a transparent conductive material.

Claim 25 (New): The method of claim 4, wherein the conductive material includes a pixel electrode.

Claim 26 (New): The liquid crystal display panel of claim 16, further comprising an active layer between the insulating layer and the data lines.